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SPACE SCIENCES LABORATORY

BERKELEY, CALIFORNIA 94720

October 31, 1973

Mr. Edward W. Crump  
Technical Monitor  
Code 430  
NASA-Goddard Space Flight Center  
Greenbelt, Maryland 20771

**"Made available under NASA sponsorship  
in the interest of early and wide dis-  
semination of Earth Resources Survey  
Program information and without liability  
for any use made thereof."**

Dear Ed:

Please accept this letter as our fifth ERTS-1 Type 1 Progress Report for the NASA-funded project entitled, "An Integrated Study of Earth Resources in the State of California Based on ERTS-1 and Supporting Aircraft Data".

Listed below are the titles of the tasks in the project and the names of the co-investigators who are responsible for each task:

REGIONAL AGRICULTURAL SURVEYS USING ERTS-1 DATA (UN640)

Donald T. Lauer, et al (Berkeley Campus)

USE OF ERTS-1 DATA AS AN AID IN SOLVING WATER RESOURCE MANAGEMENT PROBLEMS IN CALIFORNIA (UN643)

Robert Burgy, et al (Davis Campus)

ERTS-1 DATA AS AN AID TO RESOURCE MANAGEMENT IN NORTHERN CALIFORNIA (UN257)

Donald T. Lauer, et al (Berkeley Campus)

ANALYSIS OF RIVER MEANDERS FROM ERTS-1 IMAGERY (UN644)

Gerald Schubert, et al (Los Angeles Campus)

USE OF ERTS-1 DATA TO ASSESS AND MONITOR CHANGE IN THE WEST SIDE OF THE SAN JOAQUIN VALLEY AND CENTRAL COASTAL ZONE OF CALIFORNIA (UN070)

John E. Estes, et al (Santa Barbara Campus)

N74-12124

E74-10036) AN INTEGRATED STUDY OF EARTH  
RESOURCES IN THE STATE OF CALIFORNIA  
BASED ON ERTS-1 AND SUPPORTING AIRCRAFT  
DATA Progress (California Univ.) 3 p  
HC \$3.00

Unclas  
CSCL 08F G3/13 00036

USE OF ERTS-1 DATA TO ASSESS AND MONITOR CHANGE IN THE  
SOUTHERN CALIFORNIA ENVIRONMENT (UN314)

Leonard W. Bowden, et al (Riverside Campus)

DIGITAL HANDLING AND PROCESSING OF ERTS-1 DATA (UN645)

Vidal Algazi, et al (Davis and Berkeley Campuses)

USE OF ERTS-1 DATA IN THE EDUCATIONAL AND APPLIED  
RESEARCH PROGRAMS OF THE AGRICULTURAL EXTENSION  
SERVICE (UN326)

William E. Wildman (Davis Campus)

USE OF ERTS-1 DATA IN IDENTIFICATION, CLASSIFICATION,  
AND MAPPING OF SALT AFFECTED SOILS IN CALIFORNIA (UN327)

Gordon L. Huntington (Davis Campus)

During this last reporting period, emphasis has been placed on expressing, in meaningful quantitative terms, the capability of identifying and mapping significant earth resource features by means of manual and automatic analysis of ERTS-1 data.

Several demonstration or quasi-operational studies have been performed which assess such factors as (1) the ground data and aircraft under-flight requirements and (2) the efficiency of the sampling design that is required for operational use of ERTS-1 data. In addition, where possible, estimates of the benefits of the application of ERTS-1 data have been made in quantitative terms.

Four published papers based on our study have been released during the period covered by this report. Three of the papers were presented at the symposium entitled Management and Utilization of Remote Sensing Data held at Sioux Falls, South Dakota on October 29-November 1, 1973. The papers were (1) "ERTS-1 Analysis of Wildland Resources Using Manual and Automatic Techniques", by P. F. Krumpke, D. T. Lauer and J. D. Nichols, (2) "Combining Human and Computer Interpretation Capabilities to Analyze ERTS Imagery", by J. D. Nichols and W. M. Senkus, and (3) "Operational Uses of Satellite Imagery in Agriculture", by A. S. Benson and W. C. Draeger.

Also, a paper was presented at the conference entitled "Machine Processing of Remotely Sensed Data" held at Purdue University, West

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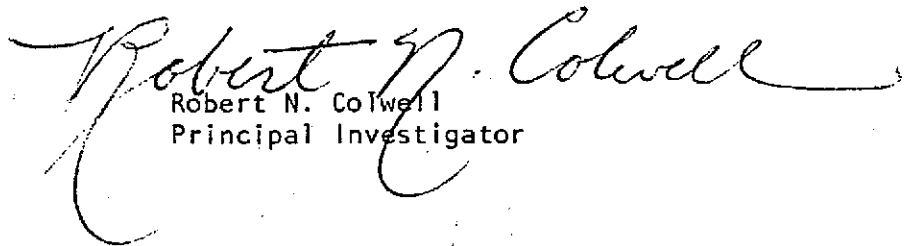
Lafayette, Indiana on October 16-18, 1973. That paper was prepared by J. D. Nichols and was entitled "Complementary Role of Humans and Computers in the Analysis of Remotely Sensed Data".

The four papers listed above will be published as part of the proceedings of the respective conferences.

In addition, at the NASA-sponsored Discipline Panel Reviews held at Goddard Space Flight Center during the week of October 22-26, seven presentations were given by various participants in our project.

No retrospect orders and no standing order changes were made during the period covered by this report.

Sincerely,

  
Robert N. Colwell  
Principal Investigator

RNC:jef

cc: Mr. I. G. Poppoff, Scientific Monitor, NASA-Ames  
Mr. Herb Blodgett, Scientific Monitor, NASA-GSFS  
Mr. J. H. Boeckel, NASA-GSFS (2 copies)  
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